

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:	)	
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<b><u>Ogg et al.</u></b>	)	
	)	
Serial No.: 10/598,078	)	Group Art Unit: 3764
	)	
Filed: August 17, 2006	)	Examiner: Andrew M. Tecco
	)	
For: AUDIO PACING DEVICE	)	<b>Board of Patent Appeals and</b>
	)	<b>Interferences</b>
Confirmation No.: 9850	)	

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**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

In support of the Notice of Appeal filed on March 4, 2010 and pursuant to 37 C.F.R. § 41.37, Appellant presents this appeal brief in the above-captioned application.

This is an appeal to the Board of Patent Appeals and Interferences from the Examiner's final rejection of claims 1-7, 9, 12-14 and 16-20 in the Final Office Action dated January 6, 2010. The appealed claims are set forth in the attached Claims Appendix.

1. Real Party in Interest

This application is assigned to Koninklijke Philips Electronics N.V., the real party in interest.

2. Related Appeals and Interferences

There are no other appeals or interferences that would directly affect, be directly affected, or have a bearing on the instant appeal.

3. Status of the Claims

Claims 1-7, 9, 12-14 and 16-20 are presently pending. Claims 8, 10, 11 and 15 have been previously canceled. Claims 1-7, 9, 12-14 and 16-20 have been rejected in the Final Office Action. The final rejection of claims 1-7, 9, 12-14 and 16-20 is being appealed.

4. Status of Amendments

All amendments submitted by Appellants have been entered.

5. Summary of Claimed Subject Matter

The present invention, as recited in independent claim 1, is directed to an audio pacing device. (See *Specification*, Abstract; and p. 1, ¶ [0001]). The audio pacing device includes a sensing unit (104) to obtain a parameter of a user in physical exercise. (See *Id.*, p. 1, ¶ [0011]; p. 2, ¶ [0020]; p. 3, ¶ [0036]; and Fig. 1). The audio pacing device further includes a memory to store a plurality of audio signals having

predetermined tempo values. (*See Id.*, p. 1, ¶ [0011]; and p. 4, ¶ [0045]). The audio pacing device further includes a processing unit (102). (*See Id.*, p. 1, ¶ [0011]; p. 2, ¶ [0020]; p. 3, ¶ [0038]; and Figs. 1-3). The processing unit (102) is configured to determine whether intensity of the parameter of the user should be increased, decreased or maintained by using the parameter of the user from the sensing unit and a predetermined reference value. (*See Id.*). The processing unit is further configured to select an audio signal having a tempo that encourages the user to increase, decrease or maintain the intensity. (*See Id.*). The processing unit is further configured to adjust the tempo of a selected audio signal up to a predetermined percentage of the predetermined tempo value. (*See Id.*). The processing unit is further configured to determine the predetermined tempo values of the plurality of audio signals, wherein the plurality of audio signals are categorized based on their predetermined tempo values. (*See Id.*).

The present invention, as recited in independent claim 14, is directed to audio pacing method. (*See Id.*, p. 1, ¶¶ [0001] and [0012]; and Fig. 3). The audio pacing method comprises the step of receiving a parameter of a user in physical exercise from a sensing unit. (*See Id.*, p. 3, ¶ [0038] – p. 4, ¶ [0043]; and Fig. 3). The audio pacing method further comprises the step of determining whether intensity of the parameter of the user should be increased, decreased or maintained by using the parameter of the user from the sensing unit and a predetermined reference value. (*See Id.*). The audio pacing method further comprises the step of selecting an audio signal, from a plurality of audio signals that have predetermined tempo values, having a tempo that enables encourages the user to increase, decrease or maintain the intensity, further comprising the step of adjusting the tempo of a selected audio signal up to a predetermined percentage of the

tempo. (*See Id.*). The audio pacing method further comprises the step of determining, by an audio pacing device, the predetermined tempo values of the plurality of audio signals. (*See Id.*). The audio pacing method further comprises the step of categorizing the plurality of audio signals based on their predetermined tempo values.

The present invention, as recited in independent claim 20, is directed to audio pacing device. (*See Id.*, Abstract; and p. 1, ¶ [0001]). The audio pacing device comprises a sensing unit (104) to obtain a parameter that is representative of a status of a user in motion. (*See Id.*, p. 1, ¶ [0011]; p. 2, ¶ [0020]; p. 3, ¶ [0035]; and Fig. 1). The audio pacing device further comprises a memory to store a plurality of audio signals having predetermined tempo values. (*See Id.*, p. 3, ¶ [0038] – p. 4, ¶ [0043]; and Fig. 3). The audio pacing device further comprises a processing unit (102) configured to (1) determine whether the parameter should be increased, decreased or maintained by using the parameter from the sensing unit and a predetermined reference value, (2) select an audio signal having a tempo that encourages the user to increase, decrease or maintain the parameter, (3) adjust the tempo of a selected audio signal up to a predetermined percentage of the predetermined tempo value, and (4) determine the predetermined tempo values of the plurality of audio signals, wherein the plurality of audio signals are categorized based on their predetermined tempo values. (*See Id.*, p. 1, ¶ [0011]; p. 2, ¶ [0020]; p. 3, ¶ [0038]; and Figs. 1-3).

6. Grounds of Rejection to be Reviewed on Appeal

- I. Whether claims 1-7, 9, 12, 14, and 16-20 are unpatentable under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,518,054 to McKinney et al.
- II. Whether claim 13 is unpatentable under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 7,518,054 to McKinney.
- III. Whether claims 1, 3, 4, 6, 7, 9, 11, 12 and 20 are unpatentable under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 6,837,827 to Lee et al. in view of U.S. Published Publication No. 2006/0112808 to Kiiskinen et al. and further in view of U.S. Patent No. 5,215,469 to Lauffer et al.<sup>1</sup>
- IV. Whether claims 5 and 13 are unpatentable under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 6,837,827 to Lee et al. in view of U.S. Published Publication No. 2006/0112808 to Kiiskinen et al. and further in view of U.S. Patent No. 5,215,469 to Lauffer et al and further in view of U.S. Patent No. 6,230,047 to McHugh as taught by U.S. Patent No. 6,135,951 to Richardson et al..

7. Argument

- I. The Rejection of Claims 1-7, 9, 12, 14, and 16-20 are Unpatentable Under 35 U.S.C. § 102(e) as Being Anticipated by U.S. Patent No. 7,518,054 to McKinney et al Should be Reversed.

A. The Examiner's Rejection

In the Final Office Action, the Examiner rejected claims 1-7, 9, 12, 14, and 16-20 under 35 U.S.C. § 103(a) as being anticipated by U.S. Patent No. 7,518,054 to McKinney et al. (hereinafter "McKinney"). (*See 01/06/10 Office Action*, p. 3, ¶ 5).

McKinney describes an audio reproduction apparatus for sports training purposes comprising a tempo derivation unit for deriving a selected tempo on a basis of

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<sup>1</sup> It should be noted that the Examiner does not include claims 14 and 16-19 in this rejection but includes them in the explanations. Appellants will consider these claims as rejected as well.

received data signals. (See *McKinney*, col. 4, lines 41-47). The tempo derivation unit may calculate a selected tempo based on input, such as a runner's pace, according to a selection strategy. (See *McKinney*, col. 4, lines 59-61). The Examiner contends that the audio reproduction apparatus disclosed in *McKinney* teaches the sensing unit, the memory, and the processing unit recited in claim 1 of the present invention. (See 01/06/10 *Office Action*, pp. 3-4, ¶ 5).

B.     The McKinney Reference Does Not Disclose or Suggest the Processing Unit Configured to Determine Whether Intensity of the Parameter of the User Should be Increased, Decreased or Maintained, as Recited in Claim 1.

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Claim 1 recites “[a]n audio pacing device, comprising: a sensing unit to obtain a parameter of a user in physical exercise; a memory to store a plurality of audio signals having predetermined tempo values; and a processing unit configured to (1) *determine whether intensity of the parameter of the user should be increased, decreased or maintained by using the parameter of the user from the sensing unit and a predetermined reference value*, (2) select an audio signal having a tempo that encourages the user to increase, decrease or maintain the intensity, (3) adjust the tempo of a selected audio signal up to a predetermined percentage of the predetermined tempo value, and (4) determine the predetermined tempo values of the plurality of audio signals, wherein the plurality of audio signals are categorized based on their predetermined tempo values.” (Emphasis added).

According to the Examiner's argument, the audio conditioning unit (104) of *McKinney* fully anticipates the processing unit recited in claim 1. (See *Id.*). However, Appellants respectfully submit that neither this component, nor any other

component in the McKinney apparatus perform each of the functions of the claims processing unit. As noted in McKinney, the audio conditioning unit (104) receives an input signal  $i$  and delivers an output signal  $o$ , wherein the output signal  $o$  has an output tempo  $TO$  within a predefined deviation  $d$  from a selected tempo  $T$ . (See McKinney, col. 5, lines 37-40). McKinney goes on to state:

If the absolute difference between the selected tempo  $T$  and the input tempo  $TI$  is above the predefined deviation  $d$ , the input audio signal does not conform to the user's likings as expressed in the selected tempo  $T$ , and some action has to be taken by the audio conditioning unit 104. Otherwise, in the simple realization the user hears no output audio as long as the condition is not met, since the switch 152 is open. (See *Id.*, col. 5, lines 58-64).

Accordingly, the only determination performed by the audio conditioning unit (104) is whether or not the absolute difference between the selected tempo and input tempo is within a set range. In addition, a tempo comparator 202 may also be used to send a "next audio piece" signal if the absolute difference is outside of the set range. (See *Id.*, col. 7, lines 8-13). In other words, the audio conditioning unit (104) merely reacts to the received input tempo and will only act if adjustments need to be taken. The audio conditioning unit (104) is not conditioned to determine whether there should be any adjustments in the intensity of a parameter of the user in physical exercise. In contrast to the audio conditioning unit (104) of McKinney, the processing unit of claim 1 may determine a parameter of a the user (e.g., pulse, pace, etc.) and at what stage or level of a selected exercise program, and *determine whether the user needs to increase, decrease, or maintain the current exercise intensity*. (See *Specification*, p. 3, ¶ [0038]). As the example provided in the *Specification* states: if the user's exercise intensity is insufficient

for his heart rate to attain the target, the tempo of the audio signal will be increased. (*See Id.*, p. 3, ¶ [0040]). In other words, the processing unit of claim 1 is aware of the parameter of the user in physical exercise and proactively determines if the intensity of this parameter should be adjusted. This is not the case for the McKinney apparatus. While McKinney describes the use of a heart rate meter (132) and a pace meter (134) for measuring parameters, McKinney fails to teach or suggest any component that determines whether intensity of these parameters should be adjusted. McKinney simply takes these parameters as input for the tempo derivation unit 103. In short, the McKinney apparatus adjusts the tempo of the output audio based on the changes to the measured pace and/or heart rate.

It should be noted that the McKinney apparatus further includes an audio processing unit (108). (*See Id.*, col. 6, lines 37-44). However, as noted by McKinney, the audio processing unit (108) only serves to construct the output signal *o* with an output tempo *TO* being roughly the selected tempo *T*. (*See Id.*). In other words, the audio processing unit (108), merely provides a tempo adjustment option to the McKinney apparatus. Accordingly, there is no mention whatsoever throughout the McKinney disclosure that would otherwise indicate that any of the described components determine if the intensity of the pace should be adjusted or if the intensity of the heart rate should be adjusted.

Appellants, therefore, respectfully submit that McKinney fails to disclose or suggest, “a processing unit configured to (1) determine whether intensity of the parameter of the user should be increased, decreased or maintained by using the parameter of the user from the sensing unit and a predetermined reference value,” as



recited in claim 1. Thus, the rejection of claim 1 should be withdrawn. Since claims 2-7, 9, and 12 depend from claim 1, the rejection of these claims should also be withdrawn.

- C. The McKinney Reference Does Not Disclose or Suggest the Processing Unit Configured to Adjust the Tempo of a Selected Audio Signal Up to a Predetermined Percentage of the Predetermined Tempo Value and Determine the Predetermined Tempo Values of the Plurality of Audio Signals, Wherein the Plurality of Audio Signals are Categorized Based on Their Predetermined Tempo Values, as Recited in Claim 1.

As noted above, claim 1 recites “[a]n audio pacing device, comprising: a sensing unit to obtain a parameter of a user in physical exercise; a memory to store a plurality of audio signals having predetermined tempo values; and a processing unit configured to (1) determine whether intensity of the parameter of the user should be increased, decreased or maintained by using the parameter of the user from the sensing unit and a predetermined reference value, (2) select an audio signal having a tempo that encourages the user to increase, decrease or maintain the intensity, (3) *adjust the tempo of a selected audio signal up to a predetermined percentage of the predetermined tempo value*, and (4) *determine the predetermined tempo values of the plurality of audio signals, wherein the plurality of audio signals are categorized based on their predetermined tempo values.*” (Emphasis added).

McKinney discloses an audio reproduction apparatus (100) for sports training purposes that includes a tempo derivation unit (103) for deriving a selected tempo T. (See *McKinney*, col. 4, ll. 46-47). The derivation unit (103) derives the selected tempo T based on data signals (d1, d2, d3), which can be pace, acceleration, deformation, heart rate, etc. (See *Id.*, col. 4, l. 46 – col. 5, l. 7). Alternatively, McKinney

discloses that a user can choose the selected tempo. (*See Id.*, col. 5, ll. 22-24). The output tempo *TO*, *i.e.* the tempo heard by the user, is outputted “within a predefined deviation *d* from the selected tempo *T*.” (*See Id.*, col. 5, ll. 39-40). So, the played audio signal is within a predefined deviation of the selected tempo. In contrast, claim 1 recites “a plurality of audio signals having predetermined tempo values” and “adjust the tempo of a selected audio signal up to a predetermined percentage of the predetermined tempo value.” So, according to claim 1, each audio signal has a tempo value and that tempo value is adjusted up to a predetermined percentage of the tempo value of the audio signal, not the desired (selected) tempo value as taught by McKinney.

Furthermore, McKinney explicitly discloses that the audio reproduction apparatus (100) “is only arranged to select input audio of substantially the desired tempo and is not arranged to change the tempo of a selected piece of audio.” (*See Id.*, col. 6, lines 20-23). Subsequently, McKinney states that a song can be processed to obtain 10 versions, each with a different tempo, “*e.g.* on a p.c. -, which are then downloaded into the audio source 120 of *e.g.* a portable solid state MP3 or CD player.” (*See Id.*, col. 5, lines 23-26). Therefore, Appellants respectfully submit that McKinney fails to disclose or suggest adjusting “the tempo of a selected audio signal up to a predetermined percentage of the predetermined tempo value,” as recited in claim 1 and reiterates that claim 1 is allowable over McKinney. Thus, the rejection of claim 1 should be withdrawn. Since claims 2-7, 9, and 12 depend from claim 1, the rejection of these claims should also be withdrawn.

Claim 14 recites, “adjusting the tempo of a selected audio signal up to a predetermined percentage of the tempo.” Therefore, Appellants respectfully submit that

claim 14 and its dependent claims 16-19 are allowable over McKinney for at least the same reasons previously presented with regard to claim 1. Thus, the rejection of this claim should also be withdrawn.

Claim 20 recites, "adjust the tempo of a selected audio signal up to a predetermined percentage of the predetermined tempo value." Therefore, Appellants respectfully submit that claim 20 is allowable over McKinney for at least the same reasons previously presented with regard to claim 1. Thus, the rejection of this claim should also be withdrawn.

II. The Rejection of Claim 13 Under 35 U.S.C. § 103(a) as Being Obvious Over McKinney Should Be Reversed

A. The Examiner's Rejection

In the Final Office Action, claim 13 stands rejected under 35 U.S.C. § 103(a) as obvious over McKinney. (*See 01/06/10 Office Action*, p. 8, ¶ 8).

B. The McKinney Reference Does Not Disclose or Suggest the Processing Unit Configured to Determine Whether Intensity of The Parameter of the User Should be Increased, Decreased or Maintained As Recited In Claim 1

For at least the reasons stated above, Appellants respectfully submit that McKinney fails to teach or suggest all of the limitations recited in independent claim 1. Since claim 13 depends, and therefore include all the limitations of claim 1, Appellants respectfully submit that these claims are also allowable over McKinney. Thus, the rejection of this claim should also be withdrawn.

- III. The Rejection of Claims 1, 3, 4, 6, 7, 9, 11, 12, 14, and 16-20 Under 35 U.S.C. § 103(a) as Being Obvious Over U.S. Patent No. 6,837,827 to Lee et al. in View of U.S. Published Publication No. 2006/0112808 to Kiiskinen et al. and Further in View of U.S. Patent No. 5,215,469 to Lauffer et al. Should Be Reversed

A. The Examiner's Rejection

In the Final Office Action, Claims 1, 3, 4, 6, 7, 9, 11, 12, 14, and 16-20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,837,827 to Lee et al. (hereinafter "Lee") in view of U.S. Published App. No. 2006/0112808 to Kiiskinen et al. (hereinafter Kiiskinen) and further in view of U.S. Patent No. 5,215,469 to Lauffer et al. (hereinafter Lauffer). (*See 01/06/10 Office Action*, p. 9, ¶ 9).

- B. The Cited References Do Not Disclose or Suggest the Processing Unit Configured to Determine the Predetermined Tempo Values of the Plurality of Audio Signals As Recited In Claim 1

Lee describes a personal training device adapted to assist a user in reaching performance goals. (*See Lee*, Abstract). However, this disclosure does not meet the recitation that the claimed audio pacing device determines the predetermined tempo values of the plurality of audio signals. Increasing the frequency of the audible cue does not equate to determining the actual tempo value of the audible cue. For example, in the claimed invention, if an audio signal has a tempo of 5, the audio pacing device determines that value. In contrast, Lee fails to disclose or suggest that the device (10) is what determines the frequency of the audible cues. In fact, Lee is silent as to what determines the frequency. Usually, as is known in the art, an audio signal is provided to

the device with its tempo value. Accordingly, Lee fails to disclose or suggest an audio pacing device determining “the predetermined tempo values of the plurality of audio signals,” as recited in claim 1.

In order to cure the deficiencies of Lee, the Examiner relies on Kiiskinen. However, Kiiskinen describes a media data format used with audio devices (10). (*See Kiiskinen*, Abstract). The audio device comprises a reading means (11), selection means (13), and storage means (12). (*See Id.*, p. 3, ¶ [0045]). The reading means (11) reads “a media data format comprising music data defining a music track and metadata defining metadata associated with the music track.” (*See Id.*). Kiiskinen discloses that the metadata is defined by the ID3v2 tagging system which “identifies several different metadata types associated with a music track comprised in an MP3 file.” (*See Id.*). In addition, each MP3 stored on the storage means (12) includes a tempo class value between 1-10 (1 being the lowest tempo range and 10 being the highest tempo range). (*See Id.*, p. 3, ¶ [0046]). So, the MP3’s that are stored on the storage means (12) already have a tempo class value. In contrast, claim 1 recites an audio pacing device determining “the predetermined tempo values of the plurality of audio signals. Kiiskinen fails to disclose or suggest that the device (10) determines the tempo class value, but rather that the MP3 is provided to the storage means (12) in the device (10) with a tempo class value.

Accordingly, Appellants respectfully submit that McKinney, Lauffer, and Richardson fail to cure these deficiencies and that Kiiskinen, Lee, McKinney, Lauffer, and Richardson, taken alone or in any combination, fail to disclose or suggest an audio pacing device determining “the predetermined tempo values of the plurality of audio

signals,” as recited in claim 1. Therefore, it is respectfully submitted that claim 1 and its dependent claims 3, 4, 5, 6, 7, 9, 11, 12, and 13 are allowable and the rejection of claims 1-7, 9, and 12 should be withdrawn.

Claim 14 recites, “determining, by an audio pacing device, the predetermined tempo values of the plurality of audio signals.” Therefore, Appellants respectfully submit that claim 14 and its dependent claims 16-19 are allowable for at least the same reasons previously presented with regard to claim 1. Thus, the rejection of claims 14, and 16-19 should be withdrawn.

Claim 20 also recites, “determine the predetermined tempo values of the plurality of audio signals.” Therefore, Appellants respectfully submit that claim 20 is also allowable for at least the foregoing reasons presented with regards to claim 1.

IV. The Rejection of Claims 5 and 13 Under 35 U.S.C. § 103(a) as Being Obvious Over Lee in View of Kiiskinen and Laufer and Further in View of McHugh as Taught by Richardson et al Should Be Reversed.

A. The Examiner's Rejection

In the Final Office Action, claims 5 and 13 stands rejected under 35 U.S.C. § 103(a) as being obvious over Lee view of Kiiskinen and further in view of Laufer and further in view of U.S. Patent No. 6,230,047 to McHugh (hereinafter McHugh) as taught by U.S. Patent No. 6,135,951 to Richardson et al. (hereinafter Richardson). (See 01/06/10 Office Action, p. 18, ¶ 9).

B.     The Cited References Do Not Disclose or Suggest the Processing Unit Configured to Determine the Predetermined Tempo Values of the Plurality of Audio Signals As Recited In Claim 1


For at least the reasons stated above, Appellants respectfully submit that Lee, Kiiskinen and Lauffer, either alone or in combination, fail to teach or suggest all of the limitations recited in independent claim 1. It is respectfully submitted that the McHugh as taught by Richardson is insufficient to cure the above-stated deficiencies of Lee, Kiiskinen and Lauffer. Since claims 5 and 13 depend, and therefore include all the limitations of claim 1, Appellants respectfully submit that these claims are also allowable over the combination of Lee, Kiiskinen, Lauffer, McHugh and Richardson. Thus, the rejection of claims 5 and 13 should be withdrawn.

8. Conclusion

For the reasons set forth above, Appellants respectfully request that the Board reverse the rejection of the claims by the Examiner under 35 U.S.C. § 102(e) and 35 U.S.C. § 103(a), and indicate that claims 1-7, 9, 12-14 and 16-20 are allowable.

Respectfully submitted,

Date: May 28, 2010

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**CLAIMS APPENDIX**

1. (Previously Presented) An audio pacing device, comprising:
  - a sensing unit to obtain a parameter of a user in physical exercise;
  - a memory to store a plurality of audio signals having predetermined tempo values; and
  - a processing unit configured to (1) determine whether intensity of the parameter of the user should be increased, decreased or maintained by using the parameter of the user from the sensing unit and a predetermined reference value, (2) select an audio signal having a tempo that encourages the user to increase, decrease or maintain the intensity, (3) adjust the tempo of a selected audio signal up to a predetermined percentage of the predetermined tempo value, and (4) determine the predetermined tempo values of the plurality of audio signals, wherein the plurality of audio signals are categorized based on their predetermined tempo values.
2. (Previously Presented) The audio pacing device as claimed in claim 1, wherein the parameter is a pulse rate.
3. (Previously Presented) The audio pacing device as claimed in claim 1, wherein the parameter is a step-speed rate.
4. (Previously Presented) The audio pacing device as claimed in claim 1, wherein the tempo is a beat per minute value.
5. (Previously Presented) The audio pacing device as claimed in claim 2, wherein the sensing unit is a heart rate monitor.
6. (Previously Presented) The audio pacing device as claimed in claim 3, wherein the sensing unit is a step-speed measurement unit.

7. (Previously Presented) The audio pacing device as claimed in claim 1, wherein the sensing unit and the processing unit are connected in a wired or wireless way.

8. (Cancelled)

9. (Previously Presented) The audio pacing device as claimed in claim 1, wherein the predetermined reference value includes reference values selected by a user or a programmed exercise routine.

10. (Cancelled)

11. (Cancelled)

12. (Previously Presented) The audio pacing device as claimed in claim 1, wherein the audio signals are encoded in an MP3, WAV, MPEG-4, WMA, or AAC format.

13. (Previously Presented) The audio pacing device as claimed in claim 1, further including a switch to enable use of the audio pacing device in a first mode having a first sensing unit and a first parameter and a second mode having second sensing unit and a second parameter.

14. (Previously Presented) An audio pacing method, comprising the steps of:

- receiving a parameter of a user in physical exercise from a sensing unit;
- determining whether intensity of the parameter of the user should be increased, decreased or maintained by using the parameter of the user from the sensing unit and a predetermined reference value;

- selecting an audio signal, from a plurality of audio signals that have predetermined tempo values, having a tempo that enables encourages the user to increase, decrease or maintain the intensity, further comprising the step of adjusting the tempo of a selected audio signal up to a predetermined percentage of the tempo;

determining, by an audio pacing device, the predetermined tempo values of the plurality of audio signals; and  
categorizing the plurality of audio signals based on their predetermined tempo values.

15. (Cancelled)

16. (Previously Presented) The audio pacing method as claimed in claim 14, further comprising the step of a user selecting the said predetermined reference value from a group of reference values or a programmed exercise routine.

17. (Previously Presented) The heart rate audio pacing method as claimed in claim 14, wherein the audio signals are encoded in an MP3, WAV, MPEG-4, WMA, or AAC format.

18. (Previously Presented) The audio pacing method as claimed in claim 14, wherein the parameter is a pulse rate or a step speed rate.

19. (Previously Presented) The audio pacing device as claimed in claim 14, wherein the sensing unit is a heart rate monitor or a step-speed measurement unit.

20. (Previously Presented) An audio pacing device, comprising:

- a sensing unit to obtain a parameter that is representative of a status of a user in motion;
- a memory to store a plurality of audio signals having predetermined tempo values; and
- a processing unit configured to (1) determine whether the parameter should be increased, decreased or maintained by using the parameter from the sensing unit and a predetermined reference value, (2) select an audio signal having a tempo that encourages the user to increase, decrease or maintain the parameter, (3) adjust the tempo

of a selected audio signal up to a predetermined percentage of the predetermined tempo value, and (4) determine the predetermined tempo values of the plurality of audio signals,

wherein the plurality of audio signals are categorized based on their predetermined tempo values.

**EVIDENCE APPENDIX**

No evidence has been entered or relied upon in the present appeal.

**RELATED PROCEEDING APPENDIX**

No decisions have been rendered regarding the present appeal or any proceedings related thereto.